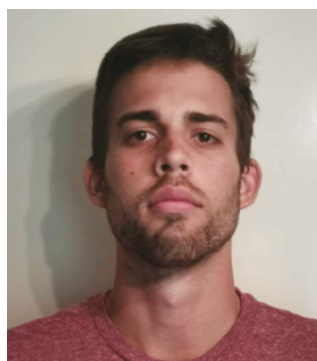


## DOMONKOS JÁNOS PERÉNYI



National Academy of Scientist Education, 5<sup>th</sup> year

University of Szeged,  
Albert Szent-Györgyi Medical School, 6<sup>th</sup> year

#### YEAR OF BIRTH

1998

#### FORMER SZENT-GYÖRGYI PUPIL

no

#### RESEARCH UNIT

University of Szeged

#### SZENT-GYÖRGYI MENTOR

Petra Hartmann

#### JUNIOR MENTOR

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#### SPECIALIZATION

mitochondrial respirational activity

#### SECONDARY SCHOOL

Radnóti Miklós  
Experimental Grammar  
School

#### NAME OF TEACHER

Sándor Bán

#### LANGUAGES

German/intermediate  
English/intermediate

#### IMPORTANCE, AIMS AND POSSIBLE OUTCOME OF RESEARCH

The main goal of the usage of prophylactic antibiotics is to prevent infections that could occur in connection with surgical interventions. Several studies have proved, that properly applied antibacterial prophylaxis plays an important role in the prevention of wound-infections. However, the effect of antibiotics is not confined only to the bacterias. Depending on the concentration of the agent and the duration of the treatment, it can cause different deformities in the tissues and cells, leading to various side-effects. Effects causing mitochondrial dysfunction have been proved in cases of several antibiotics, that were followed with increased reactive oxygen species (ROS) production, after which tissue-damage can emerge. To find a proper solution for these problems, we started to experience with some antibiotics that not have been used before. During our research we use the third generational ceftriaxone and the poorly absorbed rifaximine. The goal of our research is to examine the effects of these antibiotics on the mitochondrial respirational activity, and on the coupling of electron transport chain.

#### AMBITIONS AND CAREER GOALS

Practicing medicine always walked hand in hand with research. That is why I think it is utterly important, to take part in it during my years at the university, and get a broader perspective in disciplines. I see the scholarship of SZTA a one of a kind opportunity to develop myself, from which I hope I can make the most out of.

#### HONORS AND PRIZES

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#### PUBLICATIONS

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